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SEPTEMBER 1948

Vol. 161.

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SEPTEMBER, 1948

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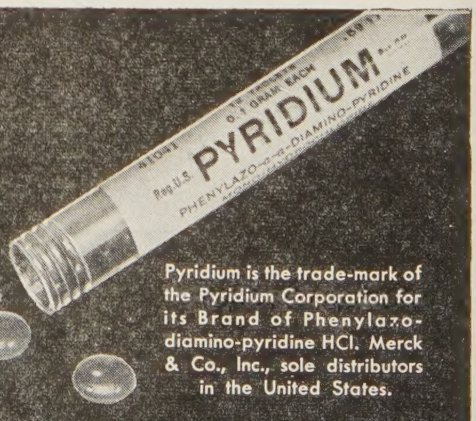

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Medical Record wishes to announce that, as of the September issue, the journal will be published by the Fox-Shulman Publications, 16th and Conlyn, N. E., Philadelphia, Pa.

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The Editor

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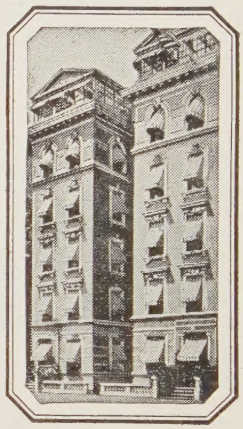

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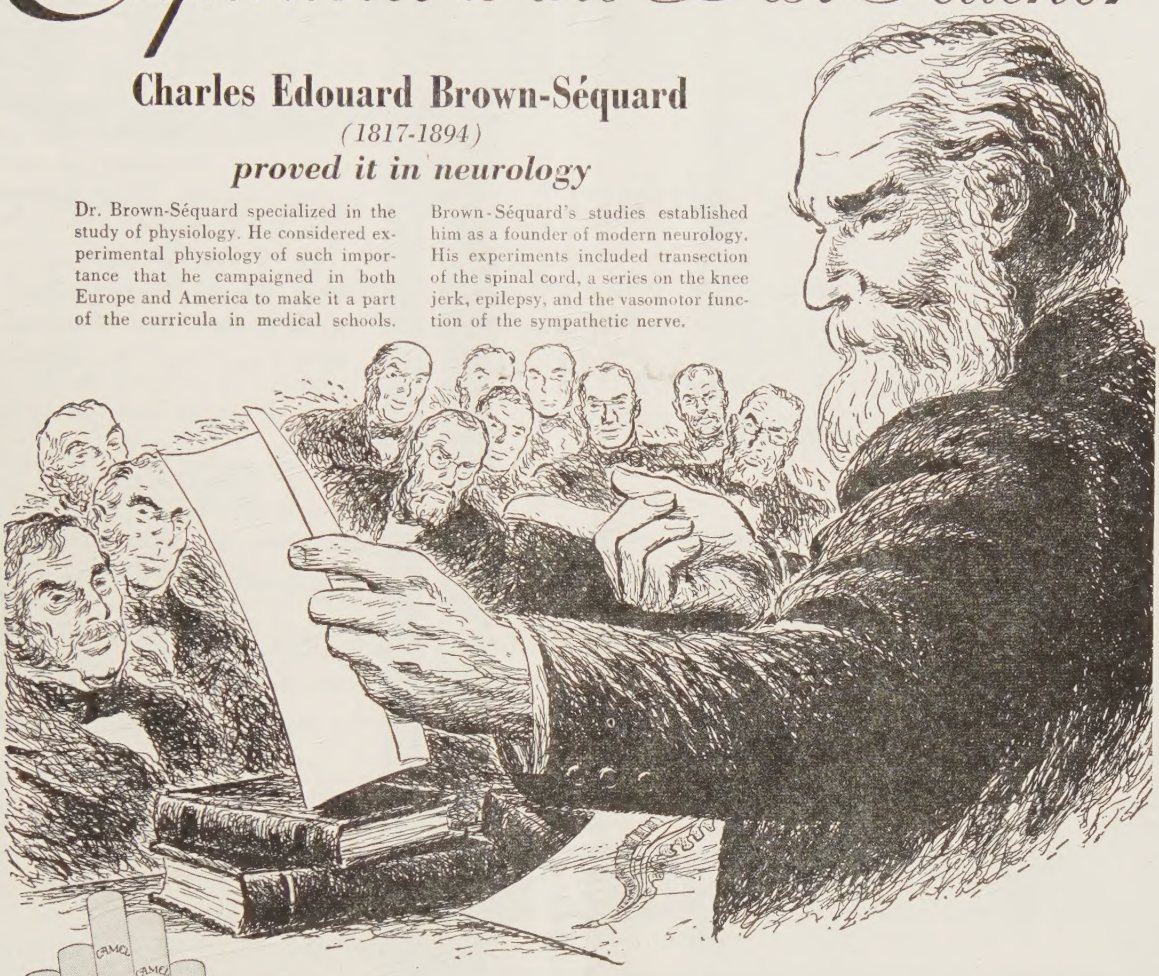

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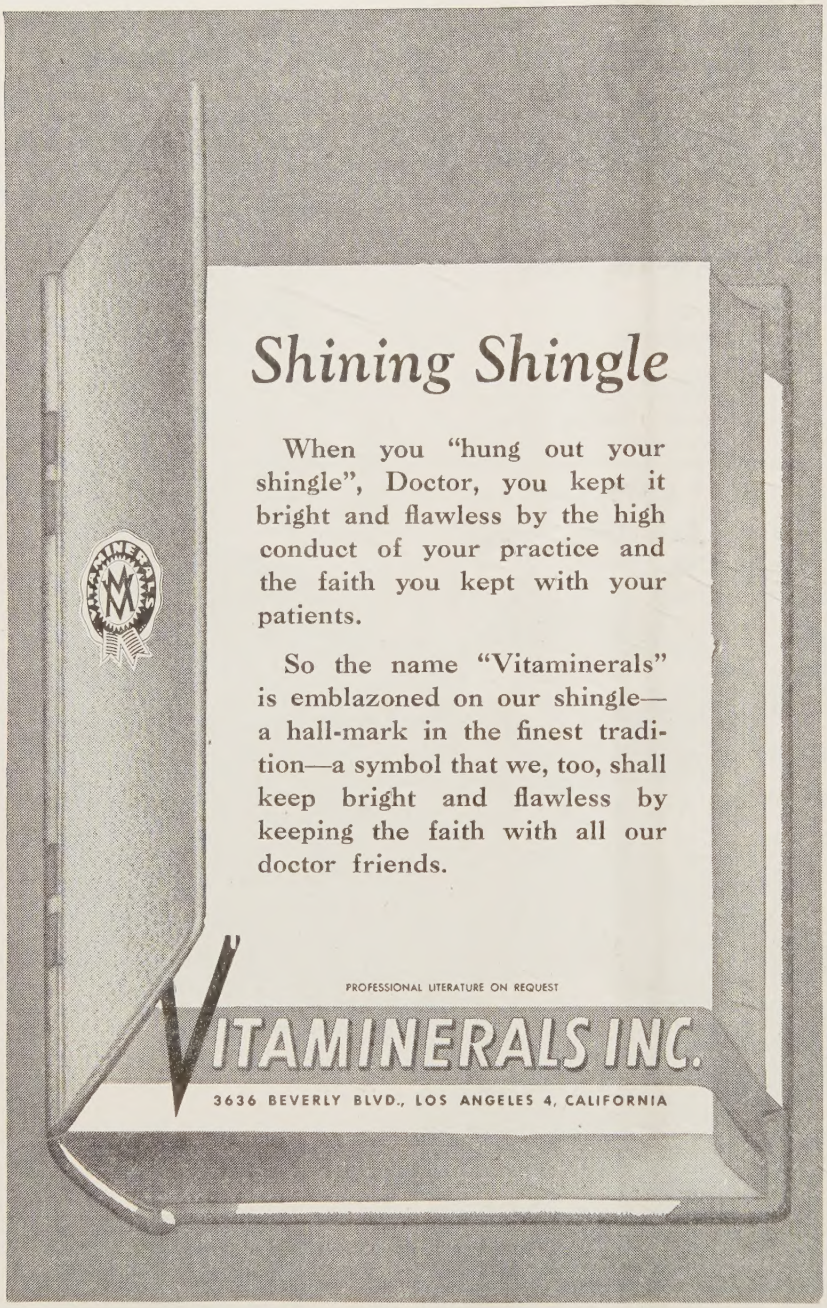
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M. P. Catherwood, dean, School of Industrial and Labor Relations at Cornell University, announced that Dr. Graham Taylor, Allan Memorial Institute of Psychiatry, Montreal, has been selected as the first industrial psychiatry fellow.

Dr. Alexander H. Leighton originated the program to train psychiatrists for the industrial and labor relations field. This fellowship is believed to be the first of its kind.

Dr. Taylor, who has made studies of industrial problems as part of his work at the Allan Memorial Institute, will divide his time between studies and research on the campus and investigations in industrial plants.

Dr. Taylor, a native of Canada, is studying under Dr. D. Ewen Cameron, at Allan Memorial Institute. After graduating from McGill and taking his M. D. there, he served a rotating internship in Montreal hospitals before joining the Royal Canadian Navy.

Discussion Of Diabetes Article

"Diabetes Is My Partner," an article which appeared in Coronet Magazine, was discussed recently by Dr. Elliot P. Joslin, diabetes specialist. Dr. Joslin stressed the helpfulness of the article and its effect on other diabetics, saying, "Diabetics can and should carve out careers for themselves, and each one who does something notable . . . urges on and encourages doctors to advance the treatment of the disease."

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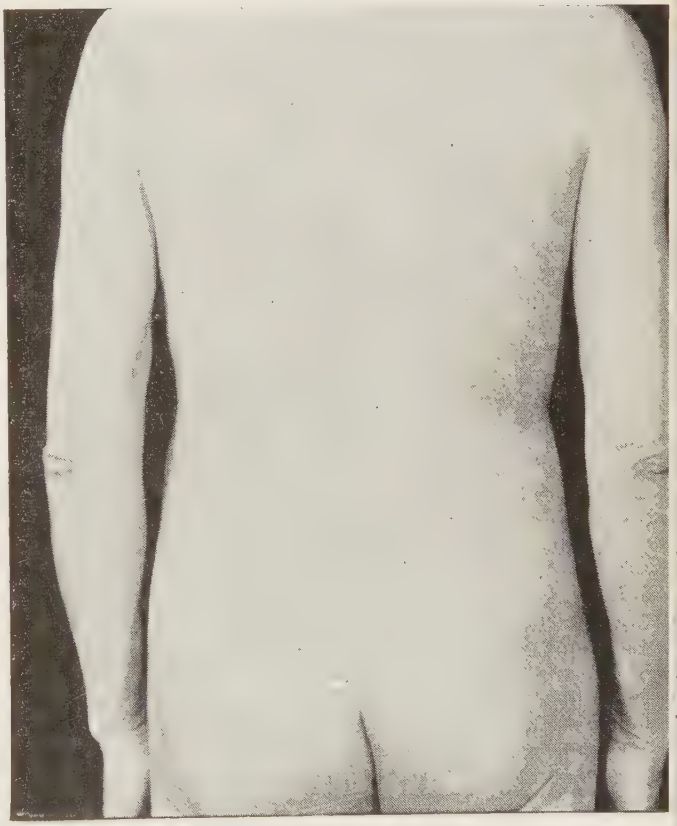

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VOL. 161, No. 8 SEPTEMBER, 1948 WHOLE No. 2787

THE PSYCHOSOMATIC APPROACH TO THE TREATMENT OF ALLERGY, BRONCHIAL ASTHMA, AND SYSTEMIC DISORDERS*

JULIUS ARKY HAIMAN, M. D.
New York, N. Y.

New interest has been aroused in psychosomatic medicine of late, although the subject *per se* is by no means new. Even the ancients knew of the influence of the mind on the body. And "lay persons" know that after a fit of anger or in the presence of grief they "cannot eat" and "feel upset."

Passions and prejudices are an integral part of all mankind, savage or civilized. We live in our hates, fears, jealousies, anxieties and are greatly influenced by the environment which helps to produce them.

Asthma, vasomotor conditions in general, and so-called "allergic reactions" are instigated and carried on by imbalance in the governing mechanism of cells, tissues, organs and systems. We speak quite often of the central nervous system and its disorders, but we are much less cognizant of the autonomic system of the sympathetic and parasympathetic network.

Let us review "in tablet form" the functions of these great governing interrelated systems.

The central nervous system (brain and spinal cord) controls intellection, and the conscious movements of the body, partly voluntary, partly involuntary.

The autonomic nervous system (Langley) is independent of the central nervous system. Its nerve fibers do not proceed directly from the nerve center to the organ controlled, but pass as neurons from the gray substance to a ganglion where they encounter a "break" or synapse on the other side of which a postganglionic neuron proceeds to the organ controlled. The autonomic fibers regulate the action of the ductless glands, the viscera, blood vessels and all organs containing involuntary muscles. The autonomic system includes all of the sympathetic system and fibers of the vagus (vagal autonomic). The action of the vagal autonomic is the opposite of that of the sympathetic, and is, therefore, known as the antagonistic system (Dorland's Medical Dictionary).

Maintenance of normal vital processes such as heart action, blood pressure, vascular tonus, body temperature and metabolism is carried on by the autonomic system. Good health depends upon a satisfactory balance between sympathetic and parasympathetic control, the two great divisions of the autonomic system. Centers located in the midbrain, pons and medulla, coordinate the autonomic functions with each other and with the central nervous system. Moreover, certain substances manufactured in the body have much to do with this maintenance, *choline* bodies for the parasympathetic, and *sympathin* or adrenin for the sympathetic division.

The contrast is quite marked: the parasympathetic system conserves energy, regulates its production, decreases oxidation, slows the heart rate, depresses metabolism and lowers blood pressure. The sympathetic system does just the opposite: it dissipates energy, increases oxidation, accelerates the heart rate, increases metabolism, and elevates blood pressure.

Malfunction of the central nervous system and autonomic systems causes "upsets" in the individual and puts him out of focus as to his environment.

Unhappy emotions are depressing and debilitating. They result in parasympathetic overactivity with spasm, hypersecretion, nausea, vomiting, edema, etc.

Happy emotions are stimulating and invigorating. They improve physiologic functions, stimulate the heart rate, metabolism, etc.

* Read before the New York Physicians' Medical Society, March 11, 1948.

Contrasted Effects of Stimulating the Parasympathetic and Sympathetic Nervous Systems

Parasympathetic	*Sympathetic*
1. Constriction of pupil. Stimulates salivary secretion.	1. Dilation of pupil. Inhibits salivary secretion.
2. Inhibition of heart, slowing its rate.	2. Acceleration of heart, increasing its rate.
3. Motor to smooth musculature of trachea and bronchi. Secretory to the bronchial mucous glands.	3. Inhibitory to smooth musculature of trachea and bronchi. Inhibits secretion of bronchial mucous glands.
4. Motor to esophagus (some inhibitory fibers also).	4. Inhibitory to esophagus.
5. Inhibitory to cardiac orifice and fundus of stomach.	5. Activity questionable.
6. Motor to lower 2/3 of stomach.	6. Inhibitory to lower 2/3 of stomach.
7. Inhibitory to pyloric sphincter.	7. Motor to pyloric sphincter.
8. Secretory to gastric glands and pancreas.	8. Inhibitory to gastric glands and pancreas.
9. Motor to gall bladder and duct; inhibitory to sphincter of Oddi.	9. Inhibitory to gall bladder and ducts; motor to sphincter of Oddi.
10. Motor to small and large bowel to anus. Inhibitory to ileocecal valve.	10. Inhibitory to small and large bowel to anus. Motor to ileocecal valve.
11. Inhibitory to anal sphincter.	11. Motor to anal sphincter.
12. Motor to urinary bladder and inhibitory to sphincter.	12. Inhibitory to urinary bladder and motor to sphincter.
13. Inhibition of muscles of external generative organs.	13. Motor to muscles of external and internal generative organs and ureters.
14. —— ——.	14. Vasoconstriction to blood vessels of mucous membranes of head. Vasoconstriction of vessels of bronchi, gastrointestinal tract and skin.
15. —— ——.	15. Motor to pilomotor to muscles and secretory to skin.

The physician experienced in the psychosomatic approach knows that he must treat the *psyche* as well as the *soma*. These terms are not well understood by those who have not been actively engaged in this type of treatment.

Some say, "I understand that you believe everything to be mental, and that pathological changes are caused only by imbalances of the autonomic or vegetative nervous systems." That is not quite so. The author believes that diagnosis is based on a thorough examination of the entire body. This includes laboratory aids, since *not all conditions are due to autonomic imbalances.*

Moreover, a most complete history should be taken. This should include childhood illnesses, environment, habits, playmates, and family relationships. Facts revealed in the history often have a most significant bearing on the disability.

A complete physical examination will reveal pathology if any pathological change has taken place. There must be no guess work. If the patient has an associated systemic complaint such as gastrointestinal symptoms, he is referred to a gastroenterologist for a complete check-up of the alimentary system. If there is a suspicion of renal involvement, a urological investigation must be made by a urologist.

The endocrines and generative organs should also be examined. A basal metabolism test, a blood chemistry are done, and x-rays are taken of the zones affected. An electrocardiogram is important since tacchycardias and extrasystoles are frequently found.

After the complete check-up, the doctor must then evaluate how much pathology exists, and what is its cause.

We believed formerly that most pathology was caused by infections, injuries, allergies, excessive climatic changes, and improper foods. Today we find that *pathological changes may also be caused by autonomic shock.* There is also the great class of pathological changes for which *no causative agent* has ever been determined; namely, growths of malignant or non-malignant nature. There are many bone changes, the causes of which, too, have never been definitely explained; e.g., Paget's and osteoarthritis.

Likewise, certain blood dyscrasias, leukemia, etc. still baffle us.

In all of the writer's cases of asthma, vasomotor rhinitis, and nasal polyps, some of which have associated symptoms of migraine headaches, gastrointestinal manifestations, skin eruptions (urticarias, hives, erythemas, eczemas), joint or muscle pains (arthritic, sub-deltoid bursitis, lumbar spasms, sacroiliac spasms, and sciatica), a complete physical check-up is integrated. Then the patient's personality is studied in the light of these findings before a definite diagnosis is given, and before any treatment is instituted.

Dr. Edward Weiss, internist, of Philadelphia, stated in his paper entitled, "Psychosomatic Aspects of Allergic Disorders," that when a person gets sick, he is sick all over; that is, the mind and body are one, and he gets sick for a variety of reasons, physical and psychical. In other words, it is usually not one thing that determines illness; there are multiple factors acting together.

Dr. Weiss quotes Dr. J. L. Haliday as follows: "In our approach to illness we must think:

"1. What kind of person are we dealing with? (Inherited and acquired characteristics, physical and psychic.)

"2. What has he met? (Germs, allergens, or emotionally disturbing events.)

"3. What has happened? (The physiological mechanism or pathogenesis of disorder.)"

Dr. Flanders Dunbar in her book, *Mind and Body,* states, "There are certain specific emotions which seem to be linked especially to asthma and hayfever. A conflict about longing for mother love or mother care is one of them. There may be a feeling of frustration as a result of too little love or a fear of being smothered by too much."

Dr. Dunbar continues, "Asthma may also serve as a means of getting attention which would otherwise be diverted to others and will finally become an unconscious reaction, if the individual is deprived of what he thinks is his due. Every sufferer from asthma soon finds from bitter experience that certain emotional storms will bring on or intensify an attack. By that same token a calming of the storm or an avoidance of it will relieve or prevent asthma."

Dr. Max Goldzieher, on speaking of migraine headaches, attributes them to pressure inside the cranium caused by an increased flow of water to the tiny blood vessels therein, because of an abnormal retention of salt in the tissues. He was very successful in treating these cases with medication which removed the excess salt and decreased the instability of the walls of the blood vessels. He found, however, that some of the factors, responsible for the conditions of the blood vessels, were psychogenic influences, nervous strain, emotional difficulties and over-work.

Let us now consider nasal sinus and chest pathology found in the asthmatic. The nasal mucosa is usually markedly swollen, blanched, whitish-grey, and water-logged. This is due to increased serous fluid in the nasal membranes This fluid is intracellular. The normal pinkish hue is not present and fine capillaries are not seen. If this water-logged condition continues, the mucosa of the middle and inferior turbinates becomes polypoid. This, in time, may give rise to nasal polyps which can be compared to the white contents of a grape.

Nasal polyps may spring from the ethmoid region (hiatus semilunaris) as well as from the mucous membrane of the antrum. In many cases, a small pedicle may attach itself to the antral mucosa and support a very large solitary polyp in the middle nasal meatus. This will obstruct nasal breathing and compel mouth breathing. There is generally a marked "post-nasal drip" from these nasal polyps which causes a tickling, scratchy, or itchy feeling of the nasopharynx. There is also a feeling of a lump in the throat, which cannot be expelled by coughing or gargling.

In cases of vasomotor rhinitis only, congestion of the mucosa may not be so great, but in most cases, during the congestive stage, the swollen inferior and middle turbinates impinge against the swollen septal mucosa and block nasal breathing. There may be complete blocking on one side and free breathing on the other side, only to have the condition reverse when there is a change in the room temperature, or in the position of the head. There is usually serous fluid in the middle or inferior meati. One seldom finds any pus in the nose at this period, but if it is found, it is usually due to a secondary infection.

In examining an asthmatic one must examine the larynx also, for stridor is caused by edema of the arytenoids, and this edema is produced by stimulation of the secretory glands of the larynx. During an asthmatic attack this secretion is poured forth in such volume in the larynx or lung that the patient, "Wonders where all of it comes from." He tries to cough up and expectorate every particle of this mucus to free his breathing. One finds a chronic laryngitis in which the false cords overlap the true cords causing a huskiness or hoarseness.

In examining the chest we find that the mucosa of the tracheobronchial tree is congested, and in marked cases, quite swollen, particularly at the hilus, extending up to the second intercostal space, and downward into the tenth intercostal space. In extreme cases there is marked dilatation of the tracheobronchial tree reducing the contractability of the mucosa and favoring bronchiectasis. This bronchial edema is produced by stimulation of the parasympathetic fibers. It is transient, however, and when the attack is over, there is an absorption of the fluid. Then breathing may assume a normal type.

However, there frequently remains some "bronchial breathing" even during a quiescent stage, when no wheezes or rales are observed. The wheezing, gasping and dyspnea excite the patient who seeks immediate relief, either by adrenalin sprays, injections of adrenalin, inhalations, injections of aminophyllin, or some form of atropine and ephedrine. Of late, inhalations of penicillin and oxygen have been in vogue. The chronic asthmatic can actually place his finger upon the area of the lung in which he feels there are wheezes.

As mentioned before, edema of the bronchial mucosa is transient which explains why, at some examinations the chest may appear clear, and, at other times, the chest will show signs of fluid, rales, etc. X-ray examination of the chest also shows these variations, and in a quiescent period there may be little tracheobronchial thickening.

An asthmatic can anticipate and prepare himself for an attack, and those who have been associated with him can usually tell also when an asthmatic attack is about to happen. The asthmatic becomes irritable, restless, and anxious, and if accustomed to using the nasal spray or laryngeal atomizer, will have it in readiness when the attack appears. The asthmatic attack, in his particular case, may come at 4 P. M. or 4 A. M. or 7 A. M. or at all three periods.

Between attacks, the patient's breathing is quiet, easy, and without pain. These periods of quiescence are definitely due to stimulation of "trigger centers." This convinced me that allergic reactions are secondary to stimulation of these sympathetic centers rather than the primary cause of asthma.

Allergy, that much discussed condition, was formerly thought to be the cause of all asthma, but those who treated asthma by allergic vaccines have been so greatly disappointed that the enthusiasm for injecting vaccines from house dust, proteins, pollens, etc. has waned. Scratch tests, intradermal tests, and patch tests were made in great number; some men

having done as many as six hundred to one thousand scratch tests on one patient! The offending allergens were supposed to have been definitely isolated. These disappointments prompted me to seek a cause of bronchial asthma other than allergens.

The author became convinced about 1930 that asthmatic attacks were brought on by stimulation of the sympathetic nerve fibers. The periodicity of these attacks made it difficult to conceive why house dust or dog hair, feathers, horse dander, etc. could produce an attack at 7 A. M., and that the patient, after clearing up within an hour or so, would not have another attack until later on in the afternoon or until the early hours of the morning! Certainly house dust was not removed as an offending agent during this intervening period between attacks.

Let's make a simple comparison. If an individual has a broken arm, the break is present at 7 A. M., and 4 P. M., as well as 4 A. M. In other words it is constant. In asthma the wheezing or respiratory attack is not constant, despite the fact that the offending allergen is present. The deduction can be made that the offending allergen is of secondary importance, while the irritation of the vegetative nervous system is of primary importance.

The late Dr. Maximillian A. Ramirez was a pioneer in the treatment of asthma in this city, and held one of the first asthmatic clinics in New York City. In reviewing some asthmatic cases a few years ago, he stated that he felt the autonomic imbalance was the primary cause, and that the allergic reactions were purely secondary. He also stated that physicians should study the emotional character of these patients carefully.

Dr. Francis Rackemann, allergist, of Harvard, when presenting a case at a Psychosomatic meeting, stated that he did not want to be known as an allergist, but rather as an internist who treated allergic individuals. In his address at the New York Academy of Medicine on February 6, 1947, he said that in asthma there is an over-lapping of the sympathetic nervous system and allergic reactions. He concluded in one case report that he does not know whether the asthma cleared up due to house dust injections, or the separation of the wife from her very irritable and disagreeable husband; but the fact is that *while she remained with her husband, she did not recover although she was taking house dust injections!*

Louis Brandes, who is conducting a large school for asthmatic children in Arizona, said that asthmatic children cleared up rather quickly once he could get the parents, particularly the mother, to leave the child in his care. If the mother stood by, there was greater difficulty in obtaining a complete cessation of all the asthmatic symptoms. He has written a paper declaring that once the symptoms have disappeared and the child has become happy in school environment, away from mother influence, the child did not react to the formerly offending allergens. It has been confirmed for the past fifteen years that once the emotional imbalance is adjusted, there is no further reaction to offending allergens of house dust or tobacco or milk or eggs, etc.

Dr. Horton, of Mayo's Clinic, in 1936, presented a moving picture showing the value of anti-histamines in the treatment of migraine headaches, particularly those of the unilateral type. After the meeting, I asked him why he had not mentioned the vegetative nervous system. He stated that there was no need to stick his neck out, as the average medical man would only criticize some of his remarks relative to the autonomic imbalances, because insufficient study had been given to this vast subject!

Dr. H. R. Miller, in addressing the New York Physicians Association, about 1939, was annoyed by a facetious question asked by a doctor in the audience. He answered, "Doctor, I did not originate the autonomic nervous system. I have only studied it, and suggest that you do the same." Since then general interest has been shown in autonomic imbalances, and articles on this subject are appearing in Medical Journals of every specialty.

Prognosis is dependent upon the sustained influence that a doctor has over his patient. If the patient is determined to get well and to accept the dictates of the physician, the prognosis of a complete recovery may be given. It must be explained to the patient, however, that the treatment is time-consuming, usually from six months to a year, and that there are periods of recurrence during this time. The patient must be cautioned about these excerbations, not to become discouraged if he has attacks after they have seemingly cleared up.

Almost everyone has observed that no matter what type of treatment is rendered, whether through a climatic or therapeutic approach, there is some improvement for a short while. The difficult part of the treatment is to reassure the patient that this upset or recurrence is of a temporary nature only, and that if he will continue resolute in carrying out the demands of the treatment, definite improvement can and will result.

Acute coryzas, gastrointestinal upsets, further shocks or griefs in the family relationship may cause a severe asthmatic attack, necessitating a stay in bed, and, at times, even the use of an oxygen tent. During this "down period" the patient will become discouraged and may seek other medical or climatic aid. It is very important to interview other members of the family to familiarize them with the method of management and the role that they must play in helping to restore their loved ones to good health.

In the treatment of chronic asthma, it is not as essential to introduce new medication, as it is to diminish the amount being taken already. Generally, he has become so accustomed to large doses of adrenalin, that he becomes adrenalin-fast; therefore, further injections of adrenalin give only temporary and very little relief. Many carry adrenalin sprays with them at all times, feeling that they must be fortified against an attack. Aminophyllin suppositories and aminophyllin solutions, per rectum, are frequently employed.

These patients are on the alert for all new forms of medication, and most of them are conversant with each new drug as soon as it is accessible. The lay magazines write alluring stories of benadryl, pyribenzamine, anthallan, etc., but soon the enthusiasm

which is created by the introduction of each of these new drugs is dissipated. Then the attacks must be controlled by a change in medication. The patient is usually apprehensive of this procedure as his system has grown accustomed to certain medications, and any change of this routine is looked upon with great anxiety.

The writer tries to refrain from giving any further adrenalin or aminophyllin as early as possible. The patient must be told to exercise great will power and determination, and that he will have to disregard nerve cravings if he desires to be truly helped. One can compare an adrenalin and aminophyllin addict to a drug addict. Great enthusiasm must be displayed by the attending physician, and he must go into all details with great zeal. At the beginning, too much stress should not be placed on the emotional imbalance, or the patient will respond with, "You would be nervous too if you suffered the ordeals that I do." The asthmatic is like an individual who is swimming with his head under water. If he cannot swim well and becomes panicky while submerged, there is a great choking sensation due to water being taken into the larynx. In the asthmatic, when a violent coughing attack occurs an impending fear as in drowning grips him. Many spasms will follow in the wake of this fear, and the patient struggles to get out of this embarrassing situation by attempting to get immediate aid if anyone is present. If he can be convinced that he must remain calm during his attack, since it is not a new experience, he will soon find that he is able to shorten the severity and length of these attacks of asthma.

To aid him at home, combinations of drugs may be given in capsule form consisting of small doses of atrophine, phenobarbital, aminophyllin, racephedrine, etc. If the patient is a hyperthyroid type, no ephedrine combinations should be given, as these seem to increase nervousness. Most patients have tried the new remedies such as penicillin injections, penicillin with oxygen inhalations, and penicillin mists without any permanent relief. If secondary infections exist, sulfa drugs may be given. Many asthmatics have an associated hypertension and here, of course, it is essential that the blood pressure be brought down.

Foods are very important in treatment. During the early stages, milk, eggs, sweets, carbohydrates, condiments, shell food, strawberries, etc. are denied. Tobacco should be reduced to a minimum, but if permitted, the milder brands only should be allowed sparingly. Candies of the hard, "chewy" type may be given, but chocolates and creams should be interdicted.

The diet should consist of four or five small meals daily. The patient may use honey instead of sugar, and lemon instead of vinegar, condiments, etc. All vegetables may be given. Boiled chicken, lean meats, lamb chops, and broiled liver are also included in the diet. Plain soups, stewed fruits, and jello are allowed. If the patient states that any one of these foods upsets him, withdraw it from the diet.

Injections of house dust or animal emanations are not used. Most patients have found these of no avail before coming to me. Some have been disappointed in climatic changes.

A two percent procaine solution is injected into the sphenopalatine ganglia, and a two percent procaine solution into the seventh cervical ganglion (stellate ganglion). Ascorbic acid capsules, 350 mgm., are given daily at home, and local applications of vonedrine or paredrine are used in the nose to afford better breathing. Large doses of Solulexin are given for supportive treatment.

Nasal ionization assists in relieving swelling of the nasal mucous membrane. Short wave (diathermy) aids in relieving congestion of the sinuses and chest. Ultraviolet and infra-red lamps help relieve tenseness. If nasal polyps are present, they are coagulated. Very large polyps are removed with a nasal snare. No ethmoidectomy is done.

A real problem arises in those cases where severe, static-like attacks occur during the early morning hours, say 3 to 4 A.M. The family and the patient become panicky and urge that the patient be removed at once to a hospital and placed under an oxygen tent. Usually a neighborhood doctor is called who insists upon giving a large dose of six to ten minims of adrenalin, and if in fifteen or twenty minutes this hasn't brought about the desired relief, he usually gives 20 cc. of aminophyllin intravenously. One can try to forestall such events by telling the patient what medicines he has at hand, so that he may realize that any additional medications will be of a similar nature only.

If one can speak to the doctor and assure him that this is just an exaggerated paroxysmal attack, and if he is experienced in handling these disturbed patients, all will be well, and the patient will report to you again for further treatment. On the other hand, many doctors feel that they would be taking a risk if these patients were not hospitalized under oxygen tents; therefore, the follow-through of these cases is not a simple procedure.

Every case must be studied individually. At first, it is important to find out the patient's likes and prejudices. It is also necessary to study a wife or husband, children, and in-laws, for this asthmatic condition not only upsets the patient but also the entire household. The patient's business associates must be discussed and an attempt made to find out if there are any unpleasant relationships there. This should be done in a subtle fashion. The patient's confidence must be obtained and retained, for without this reflected confidence the doctor will not go far. In fact, this confidence must continue to grow until the patient feels that his doctor has the correct answer for all of his problems. When this time arrives, a marked change for the better will be noted.

It takes a lot of experience, training, patience, and time to sense what irritating features are causing an emotional imbalance in the autonomic nervous system. The patient often does not want to disclose the facts, feeling ashamed. He may fear the doctor will be critical of him. After a time, if the patient does not seem to be making any progress, it is a good policy to have another heart to heart talk with him.

He must be told bluntly that either he must change

his skeptical attitude and cooperate whole-heartedly, or you will not treat him further. Introduce him to other patients who *are recovering* and to those who *have recovered* from a condition similar to his, which he thought heretofore could not be relieved and would doom him to an ever hopeless and helpless situation.

Although this doctor has spoken before many medical societies during the past twelve years, few of the doctors addressed seemed satisfied with his remarks concerning treatment. Therefore, such lengthy detail has been necessary in preparing this paper. They wish case reports.

Mrs. G. F., aged thirty-four, had been treated for asthma and nasal polyps for years. Married for ten years, she had never become pregnant. When her first asthmatic attacks occurred, she was treated by "one of the most outstanding allergists" in the city. She received house dust injections, but with only slightly favorable results. After two years of this, she developed bilateral nasal polyps which were removed by a prominent rhinologist. Asthma had existed for over six years when she first came to me.

Examination revealed many nasal polyps which filled both middle meati. There were marked wheezing and rales throughout the chest, and periodic attacks which occurred at 7 A. M., 7 P. M., and 4 A. M. She was accustomed to giving herself injections of four to six minims of adrenalin as soon as the attack began. She was now adrenalin-fast and felt hopeless concerning any improvement at all, much less a cure of her illness. There had been some free periods however.

She had taken an ocean trip to Europe seeking relief at Vichy, France. Her asthmatic attacks completely disappeared while she was on the ship and during her stay in France. She was able to dance, eat all kinds of food, and was jolly and optimistic. She was well for the first day after returning from France, but promptly developed a severe asthmatic attack at 7 P. M. These attacks continued till the following year when she went to Arizona for a three months' stay. On the way to the train her heavy breathing disappeared and her stay in Arizona was attended by complete relaxation, good health, and well-being. She was able to dance, ride horseback, swim, and eat all food without any ill effects. She continued well and free of all symptoms until the first night she returned. Then the asthmatic attacks reappeared at 7 P. M.

A careful investigation of her marital life now revealed that her husband, while a seemingly intelligent and normal individual, was troubled with a hyperthyroid condition, and was highly intolerant of anyone who complained of ill health. He was very unsympathetic after she first developed asthma, and was further annoyed when she had to be operated upon for nasal polyps. He told her that he had no sympathy for her, that she irritated him, and that her wheezing and gasping disgusted him.

Their marital intimacies practically ceased, and he hinted that he was interested elsewhere! She became jealous of him and began to phone and follow him. He became more intolerant of her and suggested a divorce, but she openly stated that she would not give him his freedom so that he could enjoy himself, while she was suffering so severely.

He then tried to bring matters to a climax by having his sweetheart move into a neighboring apartment. She had him followed by detectives and inasmuch as he was with his lady friend next door every night, there was no difficulty in confirming the suspicions that she harbored. He implored her to divorce him, but her extreme jealousy denied this. Professional consultation advised her to divorce him, for it is evident that she would never be well while she remained married to him.

They finally separated and she arranged to open a small business. As she was popular, it was only a short time before she became quite successful. Her health immediately improved, and she began once more to attend social functions with male friends. Finally, she consented to a divorce. Promptly she forgot her past marital misfortune. She no longer used adrenalin or other vasoconstrictors, and within a short time found that little medication was necessary.

About two years after her divorce, she announced her engagement to another man. She had remained consistently free of any asthmatic attacks or nasal polyps until two days before her wedding. Then she excitedly called me stating that she had had a severe asthmatic attack, and was frightened. She was fluoroscoped then reassured that she was anticipating a condition that actually did not now exist.

She left my office dubious, still undecided whether or not she should go through with the marriage, since she did not want her second husband disturbed as her first had been. However, she cleared up in two days, married, and went on an extended honeymoon. She was perfectly well during this period, and did not have any further attacks until she returned home to live with the aged mother of her husband. Shortly thereafter her asthmatic attacks began, and her husband was much concerned about his ailing and senile mother. Within a year or so the mother died. Her husband then turned his affection back to her, and since then she has been free of any asthmatic attacks. She revels in the fact that she has boundless energy, is able to eat all foods, drink and smoke to her satisfaction without any untoward effects, and considers herself a perfectly normal, healthy woman.

In discussing the various forms of treatment, it is in order to mention climate. Arizona offers relief, not because of the high, dry climate, but because many of the irritations that provoke attacks in one's previous daily environment are now absent. The excessive heat there favors less mental and physical activity, and affords opportunity for more relaxation. Anxieties as to health, finances, and unsatisfactory marital relations seem to be less important at this time. Generally there is an improvement while the patient remains in Arizona or other like places. However, the attacks usually recur when the patient returns home to the same family environment and the same daily routine.

During the past few years, many physicians have asked me about the treatment of asthma as given

by Dr. Gay, of Mississippi. There follows a resume of his work as recorded in the *Journal of the American Medical Association,* February 9, 1946, Volume 130, Page 379. "In response to an inquiry of the Gay treatment for asthma, the following abstract is cited:—"

"He states that he does not have any specific new treatment for asthma. He endeavors to correct any abnormality that may exist, paying particular attention to the gall bladder and kidneys. Most patients are given some form of calcium, such as calcium lactate, and a prescription containing Fowler's Solution and potassium iodide in varying quantities according to the age and weight and condition of the patient. If indicated, there are added small quantities of tincture of digitalis or phenobarbital, put up in a vehicle of plain water, sometimes sweetened and sometimes colored red with an inert coloring substance of no medicinal value. Sometimes an oil solution of amphetamine is given, and two drams to two ounces of light petroleum are given for nose drops.

He insists that intestinal secretions be kept acting well at all times, for which he recommends a tablet of pure bile salts and cascara made by G. W. Carnrick Company. He supplies the medicine every two weeks. He uses no ephedrine or opiates, but allows his patients to take any temporary medicines at any time, if needed, including epinephrine, aminophyllin, and ephedrine."

There are patients who have come back from this one week's treatment, enthusiastic about the improvement they have had. Then some of them later were disturbed because their usual pattern of asthmatic difficulties had returned.

This is cited in detail not as criticism but to bring out the fact that any new form of treatment, or any new location where treatment is given, will often interrupt the asthmatic stimulus. If there is any example that shows how much the psychosomatic element dominates this condition, here is a truly bonafide one. By Dr. Gay's own report, it is shown that he examines the patient and gives him medications that have been used by all other practitioners, whether they practised in rural districts or in cities. It is my impression that the relief which some of these patients derive from a week's stay there is entirely due to psychogenic influence.

Dr. Dunbar writes of the miracles of Lourdes, France, and we have all read about or seen these miracles. Some years ago, while visiting Lourdes, patients walking on crutches, riding in wheelchairs, etc., were immersed by the clergy in the lake in front of the Church and some remarkable and seemingly unbelievable improvements took place. Many were able to walk after the immersion, and felt that their bodies had been restored to normal. All of these had had many years of treatment by physicians.

This group of patients will often improve under a new procedure because they are of the psychogenic type. This shows that the mind can control *some* physical disorders, and that the pathology in these cases is caused by sympathetic stimulation. The author has never scoffed at these forms of treatment, nor minimized the improvements obtained. On the contrary, it is felt that it was incumbent upon physicians to study the "whys" and "wherefores" of these improvements.

Like improvements in asthma can be obtained where the physician thoroughly understands the psychogenic background of the patient and treats the psyche as well as the soma. Some physicians become confused when they try to trace these sympathetic stimulations from their origin to their effect, while others accept these statements given us by physiologists or neurologists as facts. Some will dispute the fact that there are "trigger centers," sympathetic and parasympathetic nerves, and secretory glands, which are stimulated and inhibited by many emotional disturbances. Those who investigate and treat these distressing manifestations which are produced by irritating influences find that the so-called pathological conditions disappear when these irritative influences are removed.

The physician who is only interested in observing pathological changes will state that, "These facts are merely theoretical," playing an unimportant role in the cause of pathological change. Unless he has been trained early to study the psychological and emotional effects upon tissue, the doctor will find it difficult to appreciate the overall picture of psyche and soma as one entity. A large number of physicians still criticize unfavorably the small number of confreres who practise psychosomatic medicine, stating that they are not in accord with this method of treatment. It is too bad for the patients that more doctors are not in accord with it.

The psychosomatic approach is becoming more and more incorporated into the practise of medicine today, than it was fifteen years ago. Dr. Anthony Bassler, in discussing an early presentation of the writer's, stated that in bringing up a subject of this type the first five years would bring years of *condemnation,* the second five years, *toleration,* and the third five years, *conciliation.* He continued, "After that, they will remark, 'Why harp on this same subject. Everyone has known these facts for the past fifteen to twenty years.'"

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THE IDENTIFICATION OF CANCER CELLS IN THE NATURAL ORGAN SECRETIONS IN THE EARLY DIAGNOSIS OF MALIGNANCY.

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The identification of cancer cells in the natural excretory secretions of the various body organs furnishes a ready and easy method for discovering the presence of, or for corroborating the diagnosis of malignancy. In view of the ever present urge to discover neoplastic disease at the earliest possible moment, the possibilities of the method should be emphasized.

Such examinations were first done in 1864 when Sanders was able to identify carcinoma cells in the voided urine. The method was again commented upon by Hampeln (5) in 1876, by Ferguson in 1892, Quensel in 1918, Stenius in 1925 and Mulholland in 1931. At the Mayo Clinic the method is being developed by Daut and McDonald (2) and by Ludden and McDonald (7) (1947).

They include not only lesions of the urinary tract proper but also speak of the possibilities of the method with prostatic cancer even before the latter is palpable by rectum or before erosion into the urethra has occurred. In renal tumors, the method is not as reliable with hypernephromata as it is with epitheliomata of the renal pelvis. In general they have not found the method to be infallible and believe that other well known diagnostic methods should be displaced, at least for the present.

The vaginal fluid was examined for the first time almost a hundred years ago by Pouchet (10). Intensive study has been going on in the last fifteen years primarily in relation to the mechanism of the menstrual function and its abnormalities. However, the demonstration of cancer cells was made at first incidentally and unexpectedly; but since then this has been done specifically and intentionally, so that Papanicolaou (9) and others have been able to obtain reliable positive results in a large percentage of their cases.

The method was used very occasionally in the study of bronchial secretions up to 1935, but in that year, Dudgeon and Wrigley (3) devised a special technic for cytological examination of the sputum, and they were able to demonstrate cancer cells in 68 percent of their cases. Thereafter Barrett (1) (1938), and Gowar (4) (1943), continued this work, and a complete study was made by Wandall (12) of Copenhagen in 1944. The percentage of positive results ranged as high as 68 percent, but by combining the sputum examination with bronchoscopic methods the percentage of positive results was much increased.

In 1946, Herbut and Clerf (6) used the combined method and examined the bronchial secretions obtained through a bronchoscope rather than the expectorated sputum itself. Superior results were then obtained up to 92.5 percent. At the Mayo Clinic, positive results are obtained by Woolner and McDonald (13) in 80 percent of the examinations without bronchoscopic aid. Woolner and McDonald (13) suggest that the method might possibly be applicable in oesophageal cancer in which exfoliated cells might appear, and be recognizable in the sputum.

Papanicolaou (9) developed a method and studied smears of gastric fluids and showed that material could be obtained in good enough preservation so that the diagnosis of gastric cancer could be made. This, however, is not as easy as with other secretions and positive results are obtained less often. He also studied aspirated duodenal fluid for similar purposes, but inasmuch as the cellular content of duodenal fluid is much less abundant than in gastric fluids, the results were even less satisfactory.

The experience of the Vincent Memorial laboratory with 50 gastric aspiration fluids was summarized by Ulfelder (11) at the last meeting of the Clinical Congress of Surgeons. Twenty-four of the specimens were from patients with proved cancer of the stomach. Curiously enough the accuracy of the method was greatest in early lesions. Wide fluctuations occur in the number of malignant cells visualized in the gastric sediment, even when the tumor is known to be shedding cells profusely. Factors, such as gastric retention, greatly diminish the chances of finding malignant cells. An improved histochemical technique is now under investigation by Lemon, Wisseman and their co-workers (8) at the Boston University School of Medicine, by which they hope to facilitate the identification of exfoliated cancer cells.

The diagnostic value of these various smear tests is based on the constant exfoliation of cancerous cells singly or in clusters from the free surfaces of a growing neoplasm. When groups of attached cells can be found, they help greatly in making a diagnosis, and for this purpose, clusters of cells showing the structural arrangement and characteristics of the tumor facilitate an opinion and render it much more reliable. In the individual cells, the size, position and staining qualities of the nuclei are significant; they are large far beyond the normal, they are atypical, they stain deeply and show deeply stained granules, they become atypical, mitoses are present in variable number, and they become multiple because of fragmentation. In some highly undifferientiated tumors the nucleus is surrounded by only a very narrow rim of cytoplasm; in others even the latter seems to be absent; in still others the cytoplasm may be relatively large. The presence of large and frequently multiple nucleoli is a definite characteristic of malignant cells.

Up to the present the method has been used rather

fragmentarily. Its potentialities are large, however, and are being appreciated more and more. The soundness, reliability and practical value of this method of diagnosis have been well established and are now more generally recognized. Its superiority over other methods and its specific advantages can no longer be disputed in suitable cases and under appropriate conditions and safeguards.

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THE ADRENOGENITAL SYNDROME

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The following observations on the present state of knowledge of the adrenogenital syndrome including Cushing's disease are offered because an intensive review of the literature gives the impression that certain accepted views require reconsideration. Therefore a discussion of these phases will make for a better understanding of the whole subject.

Adrenal Cortical Tumors in Adult Males

Practically all authors now state that adrenal cortical tumefactions induce feminization of men. This interpretation is based upon that fact that in men adrenal cortical tumors usually produce gynecomastia and sometimes impotence and testicular atrophy in addition.

Grollman (3) dissents, perhaps because he is unable to reconcile such a view with his theory of the presence of an androgenic zone of cells in the adrenal cortex. He declares that the few cases reported do not supply convincing evidence and adds "one is inclined to explain the apparent feminization to other causes than to the existence of a tumor of the androgenic tissue."

However, there can be no doubt here regarding the cause and effect.

Cases of gynecomastia, sometimes also with testicular atrophy and impotence, associated with a malignant adrenal cortical tumor have been reported by Parkes Weber (10), Holl (4), Lisser (6), Burrows, Cook, Roe and Warren (1) and Simpson and Joll (12). Other symptoms present were obesity, generalized weakness and cacexia and in some an abdominal mass was palpable.

Holl's patient made a complete recovery following removal of the tumor. In the case reported by Simpson and Joll extirpation of the adrenal growth resulted in gain in weight and strength, decrease in size of the breasts and increase in size of the testes. The symptoms later recurred apparently from metastatic activity.

Interpretation of the triad of gynecomastia, impotence and testicular atrophy as feminization is unjustified for the reason that symptoms of a similar order occur in men with tumors of the interstitial cells of the testis. These cells are regarded as the producers of the testicular hormone.

In a case reported by Hunt and Budd (5) the 42-year-old patient had enlarged painful breasts for five months and impotence for two months. Following right orchiectomy the breasts returned to a practically normal state and potency reappeared. The tumor was a benign growth of the interstitial cells.

Nation, Edmonson and Hammack (9) found 23 acceptable cases of testicular interstitial cell tumors in the literature and added three of their own. Of

the 26 cases, 21 were benign and three were malignant. Children were affected in six instances; precocious puberty was the almost invariable consequence. Gynecomastia occurred in three of the adults with benign tumors. It regressed in two after orchiectomy but persisted in the other.

Gynecomastia does not always appear in cases of either adrenal cortical tumor or testis interestitial cell tumor. Of interest in this regard is the case of malignant interstitial cell tumor recorded by Masson (7). The patient had a left orchiectomy in 1932 and died of extensive metastasis in 1941. Gynecomastia never developed. Venning (15) carried out urinary hormonal assays in the terminal stages of this case and found a daily excretion of 1040 mg. of androgen which he estimated to be fifty times normal.

Venning's findings show that men can withstand enormous amounts of androgen perhaps because their tissues had reached the physiological limit of response. This would not be the case in boys and females and so the former would develop precocious puberty and the latter, masculinization.

No explanation seems to be available for the occurrence of gynecomastia in cases of androgen-producing tumors. It seems improbable that the breast enlargement is due to a direct action of the androgen. A more likely explanation is that the androgen acts in some way upon the hypophysis and thus indirectly brings about the gynecomastia.

The presence of estrogen in the urine of men is commonly looked upon as evidence of the presence of a female hormone-producing lesion. It is regrettable that such a view has become so widespread because it makes for confusion of thought about hermaphroditism and other endocrinopathies.

The results of urinary assays for estrogen in the urine of men should not be used to the prejudice of clinical facts for two reasons:

1. The test for estrogen depends upon the production of the estrus type of vaginal epithelium in spayed rodents. This reaction may be induced by substances other than female hormone including certain androgens. These latter would have no female hormone effects in human beings.

2. There is no clinical evidence that a genetical human male is ever subjected to an ovarian follicular hormone influence at any stage of development (8).

Adrenal Hermaphroditism

The form of hermaphroditism associated with adrenal tumefactions shows two peculiarities. It is confined to females and is identical in its essential features with female pseudohermaphroditism. Both conditions exhibit female internal genitalia and male-like external genitalia.

It has been pointed out elsewhere that the essential lesion of female pseudohermaphroditism is a masculinizing process which arises in female fetuses at a particular stage of development, namely, after differentiation of the gonad and Mullerian ducts but before differentiation of the urogenital sinus (8). Prostates and (rarely) seminal vesicles may develop but there are no organs derived from differentiation of the Wolffian ducts.

Such individuals at birth therefore have ovaries, uterus and Fallopian tubes with external genitalia showing manifestations of masculinization ranging from enlargement of the clitoris to almost complete male type formations. In later life they may develop severe grades of virilism even including male sex act function.

This fetal masculinization in female pseudohermaphrodites this author attributes to remnants of testis interstitial cells in the medulla of the ovary (8). However, he had not noted the similarity to the adrenal type of hermaphroditism. It seems highly probable that these two fetal abnormalities bear the same relation as that in virilistis women, one group of whom have adrenal tumefactions and another, no discernible adrenal lesion. There are, however, good reasons for believing that activity of androgen-producing cells in the adrenal is the etiological factor in the latter group.

This identification of female pseudohermaphroditism with the adrenal type of hermaphroditism will permit us to recognize female pseudohermaphroditism as a non-gonadal deformity and thus essentially different from the other forms of pseudohermaphroditism.

The adrenal lesion apparent in certain cases of female pseudohermaphroditism is hyperplasia which is practically always bilateral. Some writers have interpreted two case reports as showing that tumors may cause the condition but this is open to question.

In the case reported by Fawcett, Hadfield and Phillips (2) there was bilateral adrenal hyperplasia with what appeared to be a sarcomatous process in the stroma. Here the tumor was not of the androgen producing variety. Scabell (11) listed a case in which the left adrenal was the seat of a tumor. However, the right was hyperplastic and the tumor on the left probably represented a change in an originally hyperplastic gland.

Disturbance of a Single Function

It is common practice now to cite as an example of derangement of one so-called function of the adrenal cortex a certain type of diabetes and the case of Sprague, Priestley and Dockerty (14) is generally used as an illustration. Their patient was a 49-year-old woman with a mass in the upper right abdomen and diabetes which did not respond to insulin. At operation a right adrenal tumor was found and removed; it proved to be carcinomatous. No adrenal cortical therapy was found necessary postoperatively. The diabetes disappeared.

Without doubt this case provides a splendid example of a disturbance attributable to one activity of cells of adrenal cortical origin. The tumor cells secreted a hormone which depressed the particular function of the anterior pituitary having to do with stimulation of the insulin secreting cells of the pancreas.

The only question to raise under this heading is this, "Isn't the pure adrenogenital syndrome an example of disturbance of one activity of the adrenal cortex? The manifestations are numerous but all stem from the one adrenal dysfunction, excessive production of androgen."

The Etiological Factor in the Adrenogenital Syndrome

It is commonly taught today that the adrenogenital syndrome is an expression of hypersecretion of the adrenal cortical cells. However, attempts at control of the disease by reducing the mass of the supposedly hyperfunctioning tissue through unilateral adrenalectomy have not given results comparable to those obtained by a like method in conditions dependent upon hyperfunction of other organs with an internal secretion as for example, hyperthyroidism. It is true that certain authors claim gratifying results form unilateral adrenalectomy but the consensus is that the operation is unavailing. Soffer (13) states categorically that, aside from the removal of a tumor when such is present, no treatment is available for the adrenogenital syndrome.

It seems highly probable that the adrenal cortex differs from other glands in being capable of producing internal secretions of a steroid nature which are pathological and so have no place in normal physiological processes. They may be divided in a general way into two groups. One group has androgenic properties and produces its effect by a direct action upon certain parts of the body. The other depresses the secretory activity of the anterior pituitary and thus indirectly produces symptoms.

These abnormal secretions may arise from cells isolated in a tumor or from cells in glands which are either hyperplastic or anatomically unchanged.

One type of abnormal secretory activity may predominate or both may be active simultaneously. Adrenal virilism exemplifies abnormal adrenal androgenic secretion; adrenal diabetes, adrenal pituitary depression; and the diabetes of bearded women represents the reaction to the presence of both. Cushing's syndrome may be regarded as a state of severe depression of hypophyseal function by abnormal adrenal steroids. If potent pituitary hormones were available they could be expected to be beneficial in this disease.

These abnormal steroids are produced autonomously, for example, stimulation from the hypophysis is not required for their formation.

Contralateral adrenal cortical atrophy thus may be explained: A tumor of one adrenal cortex contains cells which have attained autonomy. They do not themselves require hypophyseal stimulation but produce an abnormal hormone which depresses the adrenotropic function of the anterior pituitary thus depriving the opposite normal adrenal of necessary stimulation.

Conclusions

The adrenogenital syndrome including Cushing's disease is brought about not by the elaboration in excess of normal adrenal cortical hormones but by the formation of abnormal adrenal steroids which possess hormonal properties. These are produced by cells which have acquired autonomy and so differ from the normal cells of the adrenal cortex which secrete in response to secretory stimulation from the anterior pituitary.

These functionally abnormal cells may be located in a tumor or contained in glands which are either hyperplastic or unchanged anatomically.

Two sets of effects are produced, first, the direct which are androgenic and second, the indirect, attributable to depression of certain hypophyseal functions.

The first causes female pseudohermaphroditism, virilism in females, precocious puberty in boys and gynecomastia in men. The latter is commonly erroneously referred to as feminization. The second brings about such conditions as the adrenal type of diabetes and Cushing's syndrome.

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1534 Pine Street

Caesar P. M. Boeck (1845-1917) reported on Multipelt benight hud sarcoid in 1899, known as Boeck's sarcoid. Caesar Boeck described the exanthems of tuberculosis, acne necrotica, and published papers on the nature of lupus erythematosus.

Vittorio Mibelli also has at least two diseases named *Mibelli's disease*. These are angiokeratoma, which Mibelli reported in 1889, although the first description was by Mr. Cottle in 1877, and porokeratosis, described by Mibelli in 1893.

Book Reviews

Dermatology—Syphilology

Modern Dermatology and Syphilology. By S. WILLIAM BECKER, M. D., clinical professor of dermatology, University of Chicago; and MAXIMILIAN E. OBERMAYER, M. D., clinical professor and chairman of the department of dermatology, University of Southern California. Second edition. With 461 illustrations and 37 full color plates. Philadelphia, London and Montreal: J. B. Lippincott Co., 1947. Pp. xxx + 1017. Price $18.00.

The first edition of this well-known work endeavored to instruct student and practitioner and to discuss those skin conditions commonly seen in the U. S., Canada and Great Britain. Tropical conditions and those "seen chiefly in seaport towns" were largely omitted. In this edition the experience acquired in World War II had to become an integral part of the text. This meant a revision of syphilis as treated today, and a deeper study of serology as related both to diagnosis and treatment.

The use of dioxan which facilitates microscopy is described under "diagnosis". The chapter on trophic and deficiency diseases has been completely rewritten. Penicillin and the sulfas are now an integral part of any therapy and are well discussed here. Moreover, the value of viewing dermatoses as "processes" rather than as "morphologic entities" is stressed.

It is, of course, high time that lesions in the skin not be considered merely as local disorders and to be treated by "rubbing something on", but they must be regarded as expressions of systemic dysfunction. Nevertheless there are still contact conditions, to be sure, which may maintain the status quo and show up as physiologic upsets in the general body economy.

Treatment in this book includes actual prescriptions set in alphabetical order for ready reference. A table presents cross sections of cutaneous conditions which enables the reader to visualize the significance of primary and secondary lesions.

Since the diagnosis of such lesions is so largely through vision of the examiner, the numerous black and white illustrations cannot be as helpful as the several colored plates. Another matter is the size of this volume,—it weighs 8 pounds. As "knowledge grows from more to more" are books to become still more ponderous?

Osteotomy

Osteotomy of the Long Bones. By HENRY MILCH, M. D., consulting orthopedist, Maimonides Hospital; attending orthopedic surgeon, Hospital for Joint Diseases and Riverside Hospital, New York; fellow of the American Academy of Orthopedic Surgeons of the American College of Surgeons of the New York Academy of Medicine. Illustrated. Springfield, Ill.: Chas. C. Thomas, 1947. Pp. xiv + 294. Price $6.75.

Osteotomy as a rule is a practise restricted to specialists in the field of orthopedic surgery. By these the book will be welcomed and carefully read. The author as he should takes a serious view of his subject and approaches it from the point of view of the mechanics and physics involved. He is not trying to be didactic but feels that only in this way can the best results be obtained from a functional point of view.

The so-called physics underlying the mechanical function of the long bones will in turn effect the muscles, blood supply and nerves as well as usefulness of the involved limb.

There is little to be gained by going into the substance of the book. The subject matter is handled sincerely, intelligently and is clearly understandable. The photographs and especially the x-rays are reproduced beautifully.

With the ever growing occurrence of long bone fractures, many surgeons who do not specialize in orthopedic surgery will no doubt want to have at hand a book of this type. There are many regions where an orthopedic surgeon is not always available when needed for an operation involving the long bones.

Psychoanalysis

What Is Psychoanalysis? By ERNEST JONES, M. D., Revised edition. New York, N. Y.: International Universities Press, 1948. Pp. 126. Price $2.00.

Dr. Jones has taken his book of some twenty years ago, and reread it—making corrections as he saw fit. He has also given the reader an addendum, offering his version of the more recent studies particularly of those trail blazing people, Melanie Klein; and, better known to American audiences, Karen Horney.

A brief, too brief nod, is given to the pioneer Jelliffe, noted American and one time editor of ***The Medical Record***. Jelliffe may not have been the first to grasp the strengths and weaknesses of the psychoanalyst approach and he did not have the flair for publicizing his own belief.

Psychoanalysis leaves one as it finds him. If a person at this late date has no use for psychoanalysis of the Freud school reading this or any other book will not convince him. But, let a person be of the opinion each and every disease under the sun is due to some trauma in childhood—then no work is too small or no account too insignificant to bolster the belief in the method, the founder, and the pupils.

The recent rebirth of psychosomatic medicine—what a crime—is only a family doctor's version of psychoanalysis according to many. The lay press has grasped psychosomatic to its breast even as it did Freud at the turn of the century. The true believer has everything due to psychosomatic influences or to childhood trauma, preferably a sexual one. All are wrong. But time alone will tell. In the meanwhile, if you or your patient, or the corner pharmacist requires a handy introduction to the subject, Dr. Jones has furnished it for him or her.

Peripheral Vascular Disease

Vascular Diseases in Clinical Practice. By IRVING SHERWOOD WRIGHT, M. D. Chicago, Ill.: The Year Book Publishers Inc., 1948.

Until recent years the field of peripheral vascular disease has been woefully neglected in the curricula of medical colleges. Indeed, today in a few schools is sufficient interest taken in acquainting the student

with these diseases and their clinical characteristics. As a result there are many physicians and surgeons whose understanding of peripheral vascular conditions is so limited that they are handicapped in evaluating essential clinical problems and in advising patients concerning treatment and prevention of recurrence.

This volume will be of practical value to those who find themselves in this situation and to others who may wish to refresh their memory about clinical details and management of some of the many vascular syndromes.

Among the most common errors is undue concentration on local lesions without adequate evaluation of the condition of the entire vascular system. Throughout this volume, therefore, the importance of complete vascular surveys is emphasized. In the past the study of cardiology has been sharply separated from investigation of the peripheral blood vessels and has usually been limited to consideration of the heart and aorta. In the future, courses in medical schools should interpret cardiovascular disease in its broadest sense, and physicians who term themselves cardiovascular specialists should be prepared to care for all diseases affecting the heart and the blood vessels.

This book, therefore, should be regarded not as a treatise on a separate field of peripheral vascular disease but as a supplement to existing volumes on heart disease. The book is well written, well illustrated and well organized for everyday practice.

Dermatology

Diseases of the Skin. By OLIVER S. ORMSBY, M. D., Rush professor of dermatology emeritus, University of Illinois; attending dermatologist, Presbyterian Hospital of Chicago; member of the American Dermatological Association and the American Academy of Dermatology and Syphilology; HAMILTON MONTGOMERY, M. D., M. S., associate professor of dermatology and syphilology, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota; member of American Dermatological Association; American Academy of Dermatology and Syphilology. Seventh edition thoroughly revised. Profusely illustrated. Philadelphia, Pa.: Lea & Febiger, 1948. Pp. 1465. Price $18.00.

The new seventh edition of this popular textbook brings the reader up-to-date on the newer aspects of skin diseases in many of which advances were made during the war years. Earlier minor omissions have been corrected and it is now a more scholarly piece of work than ever, to be used profitably by the student and general practitioner as well as by the specialist.

The book begins with an extensive but very comprehensible discussion of the basic science of normal skin; the knowledge of which is essential for a full understanding of the abnormal skin. The diseases are grouped for clarification under hyperemias and inflammations, hypertrophies, atrophies, pigmentary, metabolic, neoplasms, chronic specific inflammations (tuberculosis, syphilis, leprosy, etc.), neuroses, plant parosites (mycoses) etc.

Not only have the latest therapeutic advances been included such as the use of penicillin, BAL, streptomycin, and promin but a number of diseases not previously included have been added. These are the various types of richettsial diseases, filariasis, treponematosis, toxoplasmosia, meliodosis, and rhinosporidiosis. The book is 100 pages and 40 illustrations richer than the previous edition due to these additions and innumerable revisions and amplifications. It is unfortunate for the reader, however, that color plates cannot be used more extensively since black and white illustrations are frequently unsatisfactory. Next to seeing the patients themselves, color plates are the best aid to identification of many dermatoses. Their cost, however, is prohibitive.

The photomicrographs are numerous and are helpful supplements to the well written histopathological discussions. Some, however, have lost their detail in the printing.

These histopathological discussions are one of the high points of the book. They are the most complete of their type available outside of a histopathology text. An interesting point is that they are in small print, probably to conserve space and justly so, since they are probably referred to by only a minority of the readers.

Along with the space saving idea is what I believe to be the use of paper of good quality but thinner than usual since the 1465 pages are in a thinner volume than other equivalent sized texts.

The only major fault found with this book is its relatively poor index. A volume of this size could and should have a more extensive index, particularly for cross-reference work. This, however, is a technical problem and doesn't distract from the book itself. Also in this field are the large number of type-setting errors that might well have been eliminated by careful proof-reading.

Child Psychiatry

Psychiatry for the Pediatrician. By HALE F. SHIRLEY, M. D., Published by the Commonwealth Fund, 1948.

This book is primarily for the medical student who lacks basic training in child psychiatry. It is a primer that lays the practical foundation for difficult behavior problems in pediatric practice. The author presents the basic concepts in child guidance, interprets development and habit training, unravels the underlying problems in conjunction with the intellectual, emotional, sexual and environmental factors in the everyday life of the child.

The language is simple and devoid of the psychiatric verbage that clouds understanding. Emphasis is placed upon the everyday problems based on the office experience in the Pediatric Child Guidance Clinic, Stanford University. The complexity of the child's difficulties were such that success was not always achieved despite the teamwork of the entire clinic. The author is frank in revealing what can and what cannot be accomplished with such cases. The work is a practical revelation of the problems of the child observed in various degrees in the usual course of pediatric practice.

Editorials

Twenty Six Years of Medical Service

Dr. Walter W. Palmer who was Bard Professor of Medicine in the College of Physicians and Surgeons, New York, from 1921 to 1947 has just rendered his report of service to Columbia University and to the Presbyterian Hospital for that interesting period.

Johns Hopkins seems to have been the first teaching medical institution to appoint a staff of full-time teachers and researchers. This was tried in the divisions of medicine, surgery, pediatrics, and obstetrics with success. Washington University, Saint Louis, planned a similar undertaking, but was slow in getting going. When it was decided that New York City was to have a great Center at 168th Street and Broadway, a group from Hopkins who had worked together for many years was invited to reestablish themselves on a full-time basis here. Besides Palmer, there were Dochez, Atchley, W. S. Ladd, R. F. Loeb, H. Jackson, Harrop and Ethel Benedict. George M. Mackenzie had already been at work here on a full-time basis.

This new idea suffered much criticism; for many argued, and still do, that the best clinicians are a product of bedside work with patients who pay the fees of "private practice." But it was thought that a sort of joint group could be formed with sympathetic and cooperative men in "outside practice". The loaf might thus be leavened.

"Twenty-six years of experience with this arrangement" says Dr. Palmer, "have conclusively demonstrated the desirability of the so-called full-time system in Medicine."

Upon arrival of the group, two requests were made: First, lunch facilities for the entire staff must be provided; and second, laboratory space must be increased. The request was promptly and cheerfully granted. Thus was *esprit de corps* established and maintained, but the group were obliged to work in the old Presbyterian Hospital at Madison Avenue and 70th Street until the new set-up on the Heights was ready. This came about in March 1928.

Among the first fruits to be garnered was the recognition of the work of Dochez, who demonstrated that scarlet fever was caused by hemolytic streptococci. This was soon followed by studies of the common cold. Loeb and Atchley began to work on electrolytic balance in the blood and body fluids.

Randolph West searched for the active principle in liver which controls pernicious anemia, and F. M. Hangar concerned himself with allergic phenomena and the liver. Alvin F. Coburn became convinced of the relationship, of the hemolytic streptossus to rheumatic fever; Draper began his Constitution Clinic from which psychosomatic medicine took its start; and Barach developed the first portable oxygen room.

A tribute is paid to the nursing division, and to the Misses Maxwell, Young and Conrad. Women worked also in the Metabolic Research Unit which was of great service to the internists. Mention is made of the cooperation of Dean Darrach who died recently, of the coming of Dean Rappleye, and of the migration of Tracy Putnam from Boston to take over the directorship of the Neurological Institute.

Changes in the methods of teaching were bound to come, due in part to sound recording, moving pictures, and various adaptations from business machines etc. There was reduction in didactics, adoption of the seminar in small groups, and practical work with patients for 3rd and 4th year students. Clinical clerkships were given to the former after they had finished their basic science courses. Vanderbilt Clinic was reorganized on the group practice basis. Patients are assigned in the morning for a work-up, and the student must present his case to the instructor or to a group in the afternoon.

Daily rounds are now conducted on a rotating basis by men having a variety of interests for the benefit of interns and residents. Student rounds are made separately. Special rounds formerly held in Wards are now held in the Amphitheatre thus avoiding confusion and securing more privacy from the eyes of other patients... "Teaching clinical medicine is far from simple or easy . . . The essential is a group of able teachers."

Diary of a London Medical Student From 1860-1864

It is interesting as well as instructive to learn how medical students in London, some ninety years ago, lived and worked. A Norwich youth, Shephard I. Taylor compiled a diary of his student life in London from 1860-1864.

Taylor, an acute observer-sensitive and critical, gives some good pen and ink sketches of some of the famous members of the medical

profession with whom he came into contact.

There were many great medical men and surgeons in his day for he was a student at King's College medical department when Sir William Bowman, anatomist, surgeon and an able lecturer, was on the medical staff. Bowman excelled in opthalmology but Taylor does not refer to his ability in this subject. Sir William Fergusson who introduced conservative surgery into Britain and who was famous for his speedy operations, performed a lithotomy in half a minute. This was before the coming of anesthetics. Fergusson was also a fine violinist.

Of all the celebrated physicians or surgeons whom our student met, Hughes Bennet, lecturer at King's College, impressed him the most. He was a big bulky man, who when he retired from his Edinburgh professorship, came to Norwich where he died. Another man whom Taylor admired greatly was Thomas Huxley who complimented him on the manner in which he answered questions. On the other hand, Caeser Hawkins who assisted him in examining him in surgery, was an entirely different type of person. Also Sir William Lawrence examined him in surgery.

In *materia medica* he was examined by Sir William Sharpey. George Budd one of the well known brothers, and John Erichsen were on the medical staff at King's College when Taylor was student.

Taylor served, as was the custom at the time, an apprenticeship to a general practitioner. It served him well. In the early examination he proved better than the students who had not gone through this routine.

Further on the diary gives a view of medical students life in London and in a London hospital and his opinions on teachers and teaching were written in a frank, outspoken and amusing way. Moreover, his tales of his life outside the hospital walls are in keeping with his studious and quiet character.

He was not a student of the Dickens type, but the reverse. He went on at the usual steady Victorian gait. He was an onlooker endowed with excellent brains and keen discrimination. He took his M.B. at a time when few went in for the London University medical degree. He settled in his native city Norwich where he practised for many years and where he died at the age of ninety five.

The diary is well worth reading for several reasons. It affords more than a scenic glance of the medical student's life in London from perhaps a somewhat limited outlook, but it is honestly and clearly expressed. He visualises a time when things the world over were different and supplies a relief from our existing chaotic state.

Thus the diary tells of a time when affairs generally were stable and quiet and although it perhaps engendered a too complacent attitude; yet the stage was set in the Victorian era when things were peaceful.

The Antibiotics—Their Use and Misuse

As is often the case that whenever a new and especially promising drug or other agent is brought to light, enthusiasm is likely to run wild, overstatements are made in the public press, and doctors are urged by patients and their friends to "try" the remedy for anything and everything. We physicians know all this, and yet we are often powerless to stem the tide. A reversal of opinion then takes place, and whatever merit the new agent has may be thrown into the discard.

In the May 20, 1948 issue of *Medical Progress,* Dr. Joseph Buchman has published an excellent article on the exhibition of antibiotics, especially in the management of lesions in the bones, joints and adjacent "soft tissues". Only through experience can we learn the dosage and the way of managing any hitherto untried medicament; therefore, we are bound to blunder while groping our way. But when "reports" begin to come in sufficient number, the combined experience of clinicians properly analyzed, gives us some "pointers" on what, and what-not to do!

Certain postulates must be set-up, and observed in any consideration of "the newer remedies."

1. We must determine whether the known bacterial invaders are sensitive to our weapon. It is useless to fight a giant with a feather.

2. We must obtain contact with the enemy, and we must produce sufficient artillery to destroy him. This calls for direct action by the best equipment we can muster, both in quality and in quantity.

3. We must be prepared for inevitable "reactions" of the patient's body to the new tool, and must study how much or many can be tolerated without ultimate or permanent harm.

Unless we know that a given organism is sensitive to our agent, we are doing worse than wasting time—we may be doing actual injury to the patient. However, if we know what amount of our ammunition can destroy the enemy or hold him in check, our logistics will

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be quite well established. We must use enough, but not too much.

For example, Dr. Buchman states that some 80 percent of certain pathogenic organisms (staphylococci) are susceptible to 0.2 percent of penicillin, and that 20,000 units (aqueous solution) given intramuscularly day and night will effect a sufficient blood level to overcome any focus of infection which can be reached by our measured dosage. What of the remaining 20 percent? We are considering pathogenic staphylococci. If this recalcitrant 20 percent can be overcome by higher concentration without injury to the patient, we have a completely effective destroyer. However, it must be noted that a point may be reached where a sufficient dosage may be impossible to determine.

Resistance of organisms is coming more and more to be recognized. We used to think of these microscopic enemies as inert, or capable of being rendered so by our superior intelligence. But in fact, *they* seem to have intelligence too, and are capable of setting-up barriers against our weapon. The biology of microorganisms will soon become a highly important study which will engage the best minds in this field.

We have been almost hopelessly ignorant of their life cycle as affected by environment, but this we must know if we are to defeat the unseen enemy. Inadequate and prolonged administration may be not only ineffective, but may cause the organisms to set up permanent resistance which will make penicillin ineffective for this given subject (man or other animal).

There have been many instances of indiscriminate use of penicillin upon organisms which are almost wholly indifferent to "the mould". That is like trying to pour wine into a corked bottle! But it is something more than a waste of time, money and effort,—it has unseen consequences.

Sufficient concentration must be given to affect organisms known to be sensitive to our bacteristatic, and we must get our weapon trained upon the enemy, that is to say, "contact" must be obtained and maintained.

Dr. Buchman makes a wise distinction between "medical" and "surgical" infections. It is a question of pathology. Our agent circulating in the blood stream must reach the *locus minoris* and become active there, but if thrombi are present, or if any other cause shuts off the circulation to the locus, we are again on the outside trying ineffectively to get in.

So-called medical infections are amenable to systemic therapy because blood still gets through to the field of battle, but when this field is isolated, walled off, so to speak, we must call upon surgery to evacuate the entire area. When this is done, we can and ought to bring in the systemic agents (antibiotics). Too often, previous administration of penicillin or streptomycin have set up a "fast", resistant state before surgery was undertaken. We then have lost a valuable ally after surgery has done all it can. One is allowed to try either penicillin or streptomycin 24 hours before operation, provided the germ is known, and from 10 to 14 days thereafter. The amount of 250 units per cc. of saline locally in the wound is permissible.

Reaction to any of these agents by the patient's body should be well studied in a given case, but it is not possible to be forwarned in *all* cases. Moreover, where there is a question of life or death these reactions are not consequential; for example, in meningitis or pyemia. Injected into the cerebrospinal system, we may

(*Continued on page* 486)

For a lady in distress

'Dexedrine' Sulfate relieves much of the distress of the menopause... by reawakening the patient's optimism and mental alertness ...by restoring her feeling of energy and well-being...by reviving her interest in life and living.

Unlike d-desoxyephedrine, 'Dexedrine' produces a uniquely "smooth" anti-depressant effect. It can be depended upon to improve the mood and brighten the outlook without giving the patient the uncomfortable feeling of "drug stimulation".

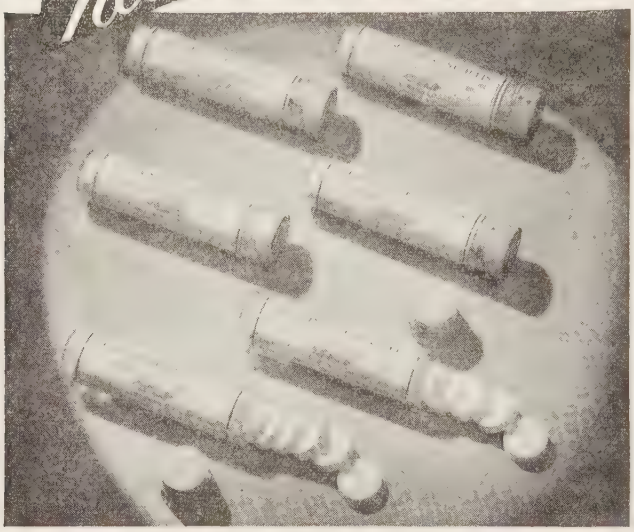
Dexedrine* Sulfate Tablets & Elixir

The anti-depressant of choice in the menopause

Smith, Kline & French Laboratories, Philadelphia

*T. M. Reg. U. S. Pat. Off. for dextro-amphetamine sulfate, S.K.F.

New Aluminum PENICILLIN.*



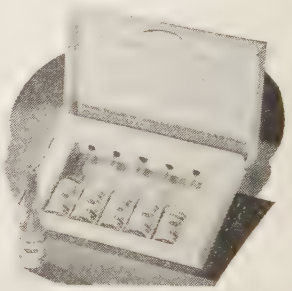
Aluminum Penicillin Oral Tablets provide for maximum utilization of the dose administered. Low solubility of the aluminum salt renders it much less liable to inactivation in the stomach. Destruction in the intestinal tract is inhibited by the addition of sodium benzoate.

Aluminum Penicillin in Oil for intramuscular injection is a bland suspension of the new relatively insoluble aluminum salt of penicillin in peanut oil alone. Fluid at body temperature, it has the outstanding advantages of not causing pain or sterile abscesses. Slow absorption is accomplished by the slight solubility of the drug itself.

Aluminum Penicillin Oral Tablets. 12 tablets, 50,000 units each.

Aluminum Penicillin in Oil. 1 cc. size ampules, 300,000 units per cubic centimeter.

* Patent applied for.



Tablets and Ampules

HYNSON, WESTCOTT & DUNNING, INC.

BALTIMORE, MARYLAND

. . . to relieve the strain of CHRONIC IRREGULARITY

WHEN aberrations of the menses suggest that normal function has overstepped the bounds of physiologic limits—the physician is often confronted with a condition which proves highly distressing to the patient. For such cases (as in amenorrhea, dysmenorrhea, menorrhagia and metrorrhagia), many physicians rely on Ergoapiol (Smith) with Savin as the product of choice. By its unique inclusion of all the alkaloids of ergot (prepared by hydroalcoholic extraction), and the presence of apiol and oil of savin—Ergoapiol (Smith) with Savin provides a balanced and sustained tonic action on the uterus, affording welcome relief in many functional catamenial disturbances. It produces a desirable hyperemia of the pelvic organs, stimulates smooth, rhythmic uterine contractions, and also serves as an efficient hemostatic and oxytocic agent. General dosage: 1 to 2 capsules 3 to 4 times daily.

Write for your copy of the new 20-page brochure "Menstrual Disorders—Their Significance and Symptomatic Treatment"

Supplied only in ethical packages of 20 capsules.

ERGOAPIOL (Smith) with SAVIN

MARTIN H. SMITH COMPANY • 150 LAFAYETTE STREET, NEW YORK 13, N. Y.

Ethical protective mark, "MHS" visible when capsule is cut in half at seam.

Planning 'After Retirement' Careers

According to Dr. Anthony J. Lanza, director, Institute of Industrial Medicine New York University-Bellevue Medical Center, preparation for active retirement from business may add at least 10 years to the average life span. Hobbies and other interests, carried through from early life, may help prevent the fear of being unable to adjust to retirement after a lifetime of business activity. Dr. Lanza's observations came as the result of a survey conducted within large business concerns by the Institute's research staff.

Dr. Lanza cited one firm where a well-organized hobby program was highly successful in developing talents in photography, electronics, painting, etc., as an active outside interest, with an annual "Hobby Show" as a climax of the year's activities. More than 750 persons were revealed to have been with this company more than 40 years.

Other firms, he said, were experimenting with similar ideas, while several had created committees or boards to plan retirement "careers" for their employees.

The survey revealed that in view of the rapid advances of medicine, which have increased the anticipated life span of both men and women, coupled with other factors such as the decrease in the birth rate and the decrease in imigration, the problem of old age has become one of the most significant in industry today.

when any of the amino acids are missing . . .

Each of the some two hundred types of highly specialized cells in the organism requires eight or more of the amino acids in its structure. When even one of these necessary "building blocks" is not available, the cell cannot be properly formed. Cannon, Geiger and others have shown that the needed amino acids must be *simultaneously* available since they are not stored as such. Hence, the rationale for administering a complete protein hydrolysate—one containing *all* the amino acids—when protein supplementation is indicated.

DPS Formula 201 (Amino Acid Supplement) is prepared specifically to give the therapeutic advantages of all the amino acids, the vitamin B complex and *strepogenin*. It is designed for effective, convenient and pleasant amino acid supplementation in the management of patients with burns, ulcers, malnutrition, gastro-intestinal disturbances, and liver disease, during pre- and post-operative care or whenever there is a need for increasing the intake of readily available protein.

For therapeutic effectiveness combined with patient acceptance

dps formula 201

Available in 7 oz. containers.
Taste-sample sent on request.

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For treatment of Nervous and Mental Disorders, Alcoholism and Convalescents. Carefully supervised Occupational Therapy. Facilities for Shock Therapy. Accessible location in tranquil, beautiful hill country. Separate buildings.

Telephone 2-1621

F. H. BARNES, M.D., Med. Supt.

(*Continued from page* 482)

find resultant arachnoiditis or transverse myelopathy. It is the old story of the lesser of two evils.

Unfortunately, patients who are brought back from death's door, all too often blame the rescuer and his tools for any adverse symptoms following recovery. In such instances, the physician should explain fully just what happened. Many such persons do not realize that they were *in extremis,* since they were unconscious and have neither memory nor realization of what actually happened. If blindness or deafness result, it is very difficult to justify the disability by any explanation whatever; for many will say that "I would be better off dead."

We can discount much of this loose talk, since most of us wish to go on living in spite of great hardships and agony of mind, spirit and body. Many lives are saved today which were lost, or would have been, even so short a while as ten years ago. Modern medicine has much to its credit, and may well take satisfactions from the amazing progress recently made.

Personals

Dr. E. B. Quarles, former associate director of Barnes Hospital, St. Louis, Mo., is the newly-appointed director of the Veterans Administration Hospitalization and Requirements Service.

Dr. Quarles served his internship at Nassau Hospital, Mineola, N. Y., and at Essex county isolation hospital, Bellville, N. J. He then engaged in industrial and general medical practice at America, Ala.

Before the war he was assistant superintendent of Barnes Hospital, St. Louis. He served more than three years with the Medical Corps of the AAF during World War II, and was released from active duty with the rank of major. Upon his return to Barnes, the doctor was named associate director, serving until April 15, 1948.

He then came to VA and spent three months touring VA hospitals throughout the United States, studying hospital administrative practices, before assuming his position in Washington, D. C.

The appointment of *E. J. Ade* as the first Fund-Raising Director of the American Heart Association was announced by Dr. Tinsley R. Harrison, president of the association. Ade, formerly associated with the John Price Jones Corporation, served as technical director for many major war fund drives.

Before the Patient Becomes Seriously Ill

The use of GRAY'S COMPOUND will save valuable time and effort in the restoration of your patient to his normal health.

Gray's Compound

stimulates the appetite and aids in the assimilation of nourishment. If the patient is "run down" from overwork, worry, seasonal colds and coughs, or suffers from the vague symptoms of old age and diminishing vitality, GRAY'S COMPOUND is usually indicated, and is a useful adjunct to such other medications as the case may indicate.

The active ingredients are: Extracts Gentian and Dandelion, Glycerine, Wine, Phosphoric Acid, Cardamom Comp. and Sugars.

THE PURDUE FREDERICK CO.

135 Christopher Street **New York 14, N.Y.**

(Also Compounders of Hyperol, a Utero-Ovarian Tonic)

Mr. Ade will coordinate the activities of national fund-raising committees which are now being established for an expanded 1949 campaign to be climaxed during National Heart Week, beginning next February 14, St. Valentine's Day. The committees will include representatives of medical groups, corporations, foundations, women's organizations, labor unions, clubs, and the publicity, sports, and entertainment fields.

Among the national fund-raising campaigns which Mr. Ade previously assisted were those of the British War Relief, Red Cross, United Service Organizations, and War Bond drives. Mr. Ade also directed fund-raising activities for the Planned Parenthood Federation of America and the New York University-Bellevue Medical Center Fund. He served as Assistant Admissions Officer of the United Nations Conference in San Francisco in 1945.

Dante A. Torres has been selected chief therapist of the New York University-Bellevue Medical Center Institute of Rehabilitation and Physical Medicine.

A graduate of New York University, with degrees in Health and Physical Education and Physical Therapy, Mr. Torres resigned his position as physical therapist at the New York Regional office of the Veterans Administration to accept the new post.

He is a veteran of World War II, having served in the Army Air Forces' rehabilitation program under Dr. Howard A. Rusk.

Mulsavite-F Nationally Released by Sharp & Dohme

Mulsavite-F capsules, a therapeutic multivitamin preparation that provides five times the Food and Drug Administration's minimal daily vitamin requirements plus the blood building effect of folic acid, was released nationally by Sharp & Dohme, Inc., Philadelphia drug manufacturer.

Designed for treatment of concurrent multiple vitamin deficiency states, Mulsavite-F capsules conform exactly with clinical standards that the daily therapeutic dose of vitamins should be at least five times the maintenance requirements.

Each capsule contains: Vitamin A, 20,000 units; vitamin D, 2,000 units; thiamine hydrochloride, 5 mg.; riboflavin, 10 mg.; ascorbic acid, 150 mg.; niacinamide, 50 mg.; pyridoxine hydrochloride, 1 mg.; calcium pantothenate, 10 mg.; mixed tocopherols, 10 mg.; folic acid, 5 mg.

By increasing the daily dosage of Mulsavite-F capsules or by varying their frequency of administration, the physician may prescribe any multiple of five times the daily vitamin requirements.

These capsules, are supplied in bottles of 30 and 500 capsules.

This product is a new dosage form of Mulsavite capsules which have been available nationally since last year. The only change in formula is the addition of folic acid, the new vitamin useful in the treatment of nutritional macrocytic anemia and the macrocytic anemias of pregnancy and pellagra.

POST - OPERATIVE INSOMNIA

As a means of overcoming restlessness and insomnia during post-operative convalescence

PASADYNE

IS IDEAL

It is therapeutically reliable, does not disturb the gastric function, depress the circulatory system or habituate the patient to its use.

John B. DANIEL, INC. **ATLANTA, GA.**

Oxygen Corporation Announces Newly Constructed Cylinder Truck

A new four wheel cylinder truck, the O.E.M. SAFE-GUARD, which will serve the triple purpose of transportation, portable bedside holder and storage unit, has been announced by the Oxygen Equipment Mfg. Corp., New York City.

Mounted on two eight inch semi-pneumatic tires and two three inch ball bearing casters for noiseless easy mobility, this all welded steel truck is equipped with completely retractable wheels. A spring locking device assures absolute safety at whatever angle the *safe-guard* cylinder truck may be adjusted.

Additional features include a beveled platform to facilitate loading and unloading. Scientifically devised leverage and balance make the *safe-guard* ideally suited for hospital or home use as a non-tipping bedside cylinder holder. Oxygen rental companies will find the truck especially handy as a cylinder carrier in and out of homes.

Neoamiron—Tasty Protein-Iron-B-Complex

Unlike most protein-iron-B-complex preparations, Neoamiron is reported to be actually delicious.

The recommended daily dose of NEOAMIRON supplies 27 Gm. of 100 percent digestible protein. Neoamiron is supplied in 8 fluid oz., and pint bottles.

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ORGANICALLY COMBINED BY REACTION WITH GLYCERIN

FOR INTERNAL ADMINISTRATION OF IODINE

Freely miscible with water. Contains no free iodine, no inorganic iodides and no alcohol.

ORGANIDIN is absorbed readily from the gastro-intestinal tract, with less irritation and less toxicity than is produced by elementary iodine. Thus it permits a maximum effect with a minimum iodine dose.

A superior product which may be administered over an extended period of time with little possibility of causing gastro-intestinal disturbances or iodism.

SUPPLIED IN 30 cc. BOTTLES WITH DROPPER

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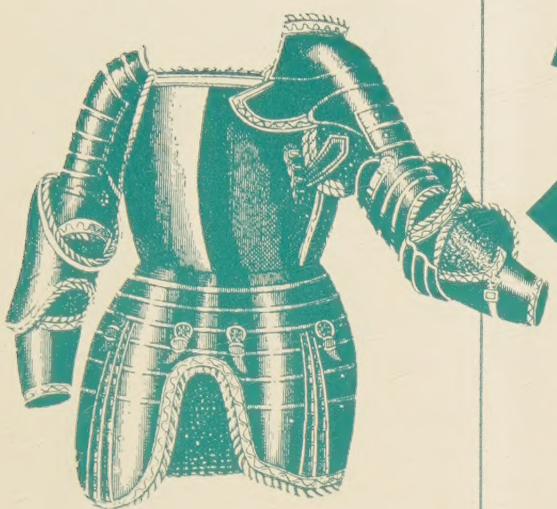
Armor for the Allergic Patient



Urticaria

Vasomotor Allergic Rhinitis

Hay Fever

Atopic Eczema

Drug-induced Dermatitis

Angioneurotic Edema

Pruritus

Diatrin* *Hydrochloride*

'WARNER'

A superior antihistaminic compound of low toxicity with little or no by-effects.

DIATRIN* hydrochloride 'Warner' provides prompt and effective symptomatic relief in urticaria, angioneurotic edema, hay fever, drug-induced dermatitis, atopic eczema, pruritus, vasomotor allergic rhinitis, the manifestations of which are believed to be due to the release of histamine in the body tissues.

*Trade Mark

DIATRIN* hydrochloride 'Warner' is available in sugar-coated oral tablets, 50 mg. each—bottles of 100 and 1,000.

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For long-sustained blood levels with fewer injections and a minimum of the undesirable reactions inherent in the older, wax-containing preparations. One 1-cc. injection of 300,000 units of Heyden's thixotropic Crystalline Procaine Penicillin G in Sesame Oil yields effective penicillin blood concentrations for 24 or perhaps even up to 96 hours. A product of exceptional uniformity and pharmaceutical elegance, it is freely syringeable through an 18-gauge needle. The reliability and safety of Heyden's P P O were thoroughly established by careful clinical trials before its release for general medical use.

Available through your regular dealer.

We are now completing clinical studies on a companion product—Crystalline Procaine Penicillin G for Aqueous Suspension. It will soon be available and, like all Heyden penicillin products, worthy of your complete confidence.

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